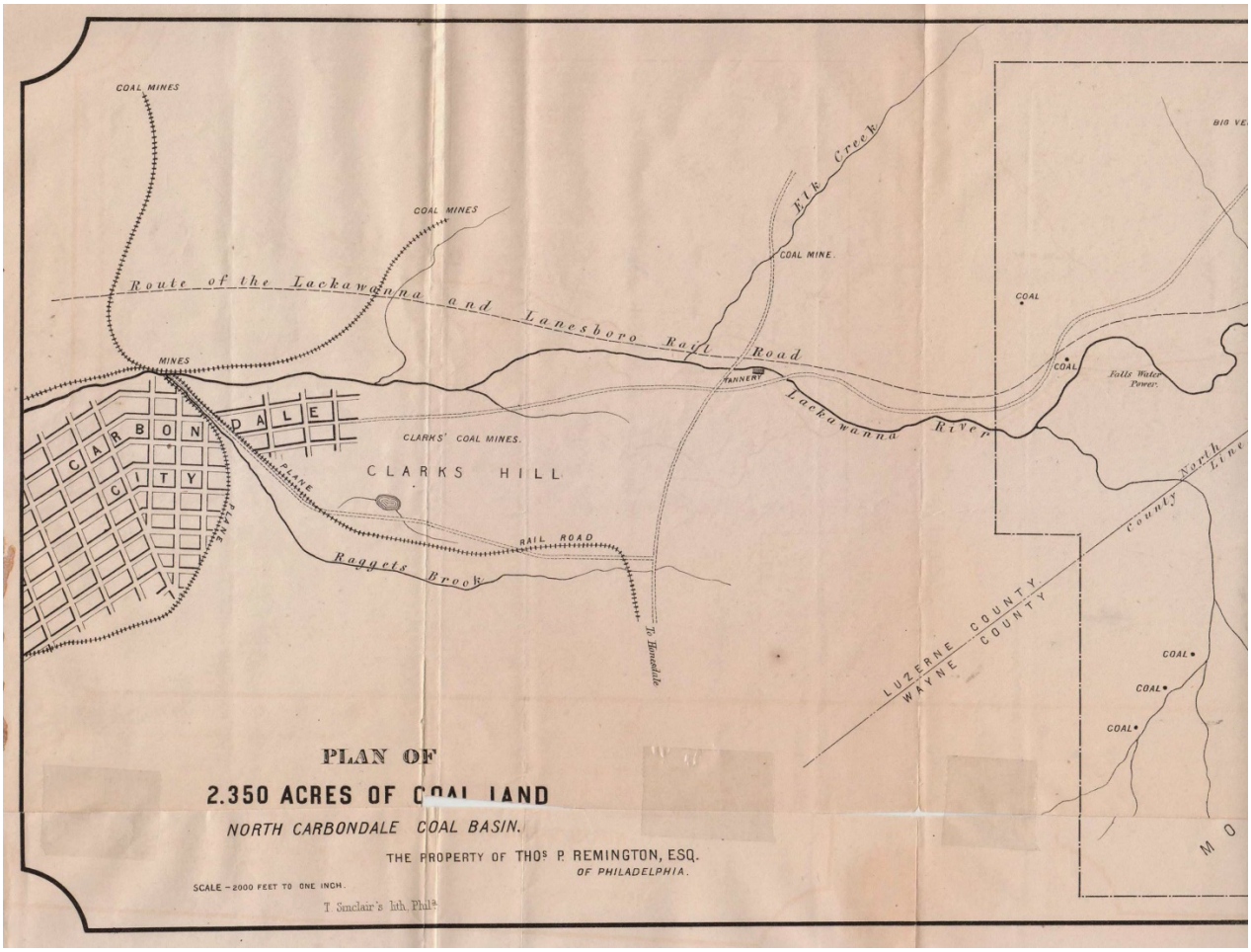
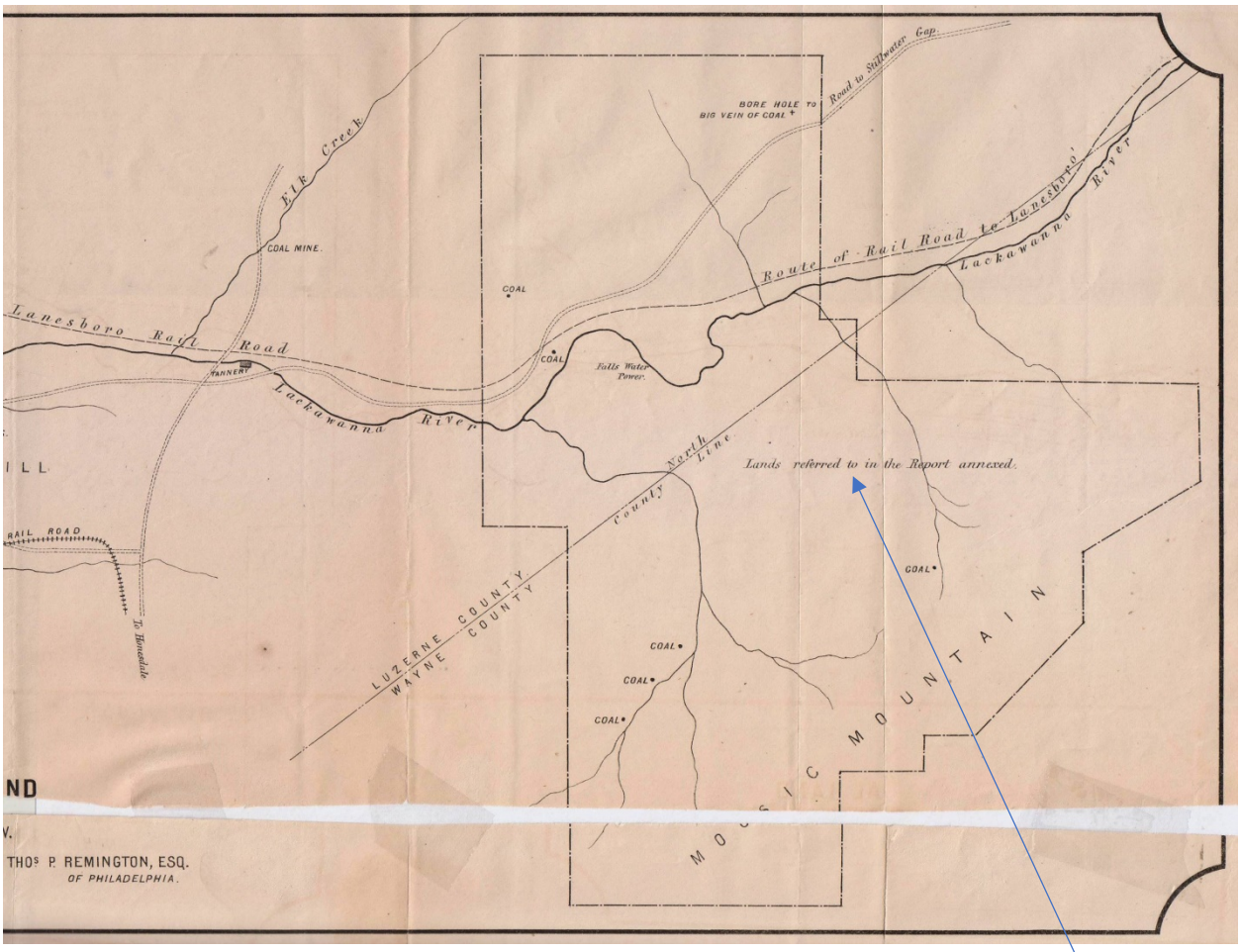
# Coal Lands in Luzerne and Wayne Counties, PA of Thomas P. Remington, Esq., Philadelphia, PA, 1857

On August 18, 2022, David Maxey (Gladwyne, PA), a descendant of the Walker family, buried in Saint Rose of Lima Cemetery, Carbondale, and of the Maxey family, buried in Maplewood Cemetery, Carbondale, and whose paternal and maternal grandparents raised their families in Forest City, PA, donated to the Carbondale Historical Society and Museum a booklet and map about the property of Thomas P. Remington, Esq., of the city of Philadelphia, that he purchased, about thirty years ago, from a manuscript and rare book dealer in Princeton, NJ. That map and that booklet are shown below.




(left side of Remington map; the Remington coal lands are shown on the right side of this map, which is given below)




The Remington coal lands (2,350 acres), which lie in the North Carbondale coal basin, are located in Luzerne (now Lackawanna) County and in Wayne County, Pennsylvania.

Presented below is a scanned copy of the 14-page report about these Remington coal lands, dated November 3, 1857, that was written by William F. Roberts, Geologist.

# REPORT

[by William F. Roberts]

UPON A

# BODY OF LAND

UNDERLAID WITH

# ANTHRACITE COAL,

SITUATED IN THE

## VALLEY OF THE LACKAWANNA,

IN THE

## Counties of Luzerne and Wayne, State of Pennsylvania.

THE PROPERTY OF THOMAS P. REMINGTON, Esq., OF THE CITY OF PHILADELPHIA.

PHILADELPHIA:
McLaughlin Brothers' Steam-power Book and Job Printing Establishment, 112 South Third St.
1857.

# REPORT.

THIS land comprises several tracts and portions of tracts in the Warrantee names of Joseph Porter, Samuel Porter and others, containing together 2353 acres. The Lackawanna river runs through this land, and its deep channel has cut the coal formation nearly to its base, leaving workable veins in the hills on both sides of this stream, which can easily be opened and the coal mined above water level. The principal stratum—that known as the Carbondale vein is cut by the Lackawanna, and owing to the steepness of the slope of the hills close to the river, the coal may be opened near the water's edge, and mining operations, extended therefrom, for long distances, underneath the land I am reporting upon, affording good sites for collieries of magnitude and importance, which can be established there with comparatively little labor and cost.

Formerly, and until lately, it was thought that no vein of coal of workable size existed in the land in the valley of the Lackawanna in its extension northeastward from Carbondale city—the seat of the principal coal mining operations of the Delaware and Hudson Canal Company. Lands in that direction were con-

sidered to have value only for their timber, which is abundant, of healthy growth, great length, large size and free from limb.

In consequence of the prevailing opinion at Carbondale, that the section of country northeast of that place, bordering on the Lackawanna was barren of workable coal, and having only one road, and that but little travelled, passing through it, it is not to be wondered at, that the lands referred to and others of that vicinity should have remained until lately unknown as to their true geological character and mineralogical value. The Delaware and Hudson Company, doubtless, thought that the coal at Carbondale underlying their own lands was inexhaustible in quantity, at least, that they had enough for supplying the demand of their customers, the limit being the capacity of their road and canal, for a very long time to come, and therefore had no occasion to trouble themselves whether other people's land contained coal or not.

The Lackawanna coal valley is an extension towards the northeast of that of the celebrated Wyoming, and these combined constitute the great northern Anthracite region. The general configuration of this coal region is a wide and shallow basin shaped through, in which the stratification undergoes in short distances remarkable changes. A progressive impoverishment of the coal strata takes place in some sections, while in others the very opposite is the case—a productive

condition is exhibited, and this change occurs in some places, not gradual but rapid.

The coal field, from its western point-like termination at Shickshinny to its eastern end, nine miles or more, northeast from Carbondale, has many minor synclinal and anticlinal axes. The situation of these curvatures of the strata is somewhat remarkable, as occuring more frequently, being more abundant in the centre of the valley in the vicinity of Pittston than at other places. There they form narrow subordinate coal basins—not continuous for long distances, and gradually shoaling up at both extremities and then dipping again, forming others lying in a longitudinal direction in the general course or strike of the strata. The curvature is more abrupt and inclination more sharp, as a general thing, through the central part of the valley, than it is on approaching the mountain boundaries of the coal field. In that portion of the great northern Anthracite region through which flows the Susquehanna river, these axes run parallel with, or nearly so, the general course of the valley and the ranges of its mountain boundaries. In the valley of the Lackawanna it is otherwise. Above the town of Scranton, in approaching Carbondale and still further towards the end of the coal formation in that direction, the line of the axes of the stratification is in a diagonal course across the main valley, and not running lengthwise with it. In that section of the coal field, in consequence of the position

of these axes, there are lands even in the centre of the valley, which have been denuded of their productive coal strata, and in this respect have little value for mining purposes.

The width of the coal fields varies in different situations, in consequence of these cross axes rapidly shoaling up in some places, and thus abruptly terminating, while at others they flatten off and extend, *in consequence*, to greater distances up the slopes of the mountains bounding the coal region.

The width of the coal formation at Carbondale, is much less than it is at other places below it. At that city the extreme width of the field don't exceed half-a-mile, while above it, where the land I am reporting upon is located, it is more than two miles wide.

From Carbondale to Mr. Remington's property, a distance of four miles, the formation gradually gets wider, and then keeps about the same width for four miles and further, after which the coal field becomes more narrow, and finally basins out on the high lands beyond the gap of "still water," its point of termination.

Close to the city of Carbondale a disruption in the formation is observable, which lifts up the coal vein mined by the Delaware and Hudson Canal Company into the hill above, or northeast of the city, known as "Clark's Hill," where this vein occupies only a small space near its summit, it dips in on one side and crops

out on the other slope of a narrow ridge. The vein rises to the northeast and in a short distance runs out in a narrow point and terminates. The stratification below it, also basins out in that direction, even to the conglomerate, the bottom rock—the base of the coal formation.

In continuing up the valley of the Lackawanna beyond the place just referred to, the coal measures begin to dip rapidly to the northeast, until the lands I am reporting upon is reached, where they have a greater thickness than at Carbondale, and hence the greater width of the coal field where this land is located. In consequence of the "throwing off" of the coal measures immediately above Carbondale, and the "setting in" of them beyond, forming a wider and larger field, having a greater thickness of strata than exists at that city, the name "North Carbondale Coal Basin" has been given to that part of the Lackawanna valley above Carbondale, thus distinguishing it from that portion of the coal field below it.

From observations made at different times, of the dip and rise of the strata, and from examinations of their character, which are well exposed along the bed of the Lackawanna and in the different cross streams tributaries to it, in the "North Carbondale Coal Basin," I have come to the conclusion, that a more regular, uniform and well defined coal formation of so large an area, is not to be found in that vicinity. It is free in

all parts of it from gravel and sand beds and from drifted rocks. In the beds of the streams the sandstones and shales outcrop in regular succession, without any marked evidence of contorted or disrupted strata. The "drift" beds further down the valley of the Lackawanna, are frequent and large, and prevent the tracing of the outcroppings of coal veins for long distances with accuracy.

Having given a general description of the geological structure of the northeastern part of the great northern Anthracite region, I will now give some particulars relative to the coal veins that are found there.

The vein of coal mined by the Delaware and Hudson Canal Company, at Carbondale, consists of two benches divided by a stratum of slate, of sufficient strength and thickness, in most places, to admit of mining them separately, and cheaper than they could be worked, if the slate was not so thick. The upper bench of coal of this vein varies in thickness, from seven to nine feet—the bottom one is five feet. This vein is, in geological height, in the vicinity of Carbondale, about one hundred feet above the conglomerate, the bottom or bed rock of the coal formation. The intervening strata between it and this rock, contains three veins of coal. The first or upper one lies about twenty feet under the one just described; it is nearly six feet thick, divided into four benches by three seams of slate. At about twenty feet more is

the geological position of the second below the large vein. This is a thin seam, not workable. The bottom vein of coal, some two to three feet thick, lies immediately over the conglomerate. In Raggel's brook on the one side, and in Falls brook on the opposite side of the basin at Carbondale, where this vein is exposed, it is covered with a coarse silicious sandstone, containing large pebbles like the conglomerate.

The most satisfactory developements have been made in and contiguous to the lands on which I am reporting, proving beyond a doubt the existence of the large vein of coal—the same as that mined by the Delaware and Hudson Canal Company at Carbondale, and establishing the fact, that it underlies a great many acres of land in the "upper" or North Carbondale coal basin. This vein has been pierced one hundred feet below the surface in the property referred to, and at nearly the same depth on adjoining lands, by boring. The situation of the hole bored on the estate of Thomas P. Remington, Esq., is near to its northeastern boundary line, on the western side of the Lackawanna. It was commenced in the bottom slate of a vein of coal five foot thick, and thence continued through shale and rode forty-six feet and eighteen inches of coal. At one hundred and two feet from the surface, a nine feet vein of coal was reached, which the auger passed through, and after penetrating eight feet of slate and bony coal, it cut through another bench of good

coal five foot thick. In an adjoining tract, the other place referred to, the bore penetrated the following strata, viz :—at seventy-eight feet below the surface, which distance was composed principally of sandstone, the drill passed through slate, two feet and-a-half, coal, ten inches, slate, one and-a-half feet and coal seven feet two inches, below these it went through twenty-seven feet of shale, and then seven feet ten inches of coal, ten inches of slate, two and-a-half feet of coal, slate two and three-quarter feet, and three feet eight of coal. In all twenty-two feet of coal. This may be considered a large developement of the Carbondale vein, and below it the underlying seams of coal before mentioned lie. Other and overlying veins have been proven in several places on the west side of the Lackawanna, on this, the property I am reporting, and those contiguous to it, in the North Carbondale coal basin.

The land on the eastern side of the river, also, is underlaid with Anthracite veins, have lately been proven in places where it was thought by some no coal could be found. In that part of Mr. Remington's property lying on the eastern side of the Lackawanna, digging for coal has been attended with great success, and the results obtained are highly satisfactory. Three veins are already opened at their outcroppings, and two others are indicated by the bold depressions they form on the slope of the mountain. Almost the whole of his land, on that side, is within the coal formation, and

the entire amount, on the western side of the river, is underlaid with the valuable and highly important coal strata before spoken of.

A topographical and geological survey of the North Carbondale coal basin, of an elaborate nature, has been made with great care, by me, for the Delaware and Hudson Canal Company, of which I noted particularly the direction of the strike and dip of the strata, together with their angle of inclination, in all places where it was deemed necessary and could be relied upon. This work, when mines are to be opened in that region, will prove of great value in indicating the proper situation for permanent collieries, and the necessary improvements belonging to them. This survey moreover, proved that the lines of the synclinal and anticlinal axes of the stratification, run diagonally across the valley of the Lackawanna, and not parallel with its general course. This position of the coal measures, accounts for the fact of finding workable veins at a much further distance from the river in some places than at others, and the property on which I am reporting is located favorably in this respect. In the North Carbondale coal basin, the upper or "Meredith" vein of coal is opened. This is four foot thick of fine coal. The second descending is "Brennan's" five foot vein—in some places from six to seven feet in thickness; then a small seam, and below it is the third principal vein of the region—the celebrated Carbon-

dale vein of two strata, one from eight to nine feet, and the other five feet thick. The fourth vein is from five to six feet thick. The fifth, a small one, and then the bottom vein of coal, from two and-a-half to three and-a-half feet in thickness. Every acre of land which covers the "Meredith" vein, contains in the aggregate, upwards of 30,000 tons of coal, and when it is taken into consideration that the veins can be readily opened by drift, and the whole of the coal mined without the aid of pumping and winding machinery, which is very expensive, it must be admitted that the land containing it will soon become, and even now is, of great value.

Where free drainage exists, as is the case in the North Carbondale coal basin, there is no danger to be apprehended, that any disastrous occurrences and difficulties will be encountered, from explosive and deletereous gases, hence no calculation need be made for losses, as contingencies from such causes—a heavy item in the expenses of many of the mining operations where the coal lies below water level. Where gas exists, the miners, in consequence of the great danger that surround them while at work, are paid more per ton than would be demanded at coal works known to be free from such a destructive element.

Having shown the advantages of the North Carbondale coal basin, and especially that part of it occupied by Thomas P. Remington, Esq., for cheap mining, I shall now show that its marketable position is highly

favorable, and will be a superior one, when the Lackawanna and Lanesboro railroad is made. This road, surveyed by John C. Trautwine, C. E., starts at the town of Hyde Park, where it connects with the Lackawanna and Bloomsburg railroad, continues up the valley of the Lackawanna, through the land on which I have been reporting to Starucca Creek, and there joins the New York and Erie railroad, and also the branch leading to the Albany and Susquehanna railroad. From these lands, the distance by rail, will be about 34 miles to the New York and Erie Railroad. In speaking of the advantages of this road, Mr. Trautwine says: "The Lackawanna coal basin," (North Carbondale being its northeastern termination,) stretches its right arm almost to the borders of the State of New York, and as our charter confers no special privileges of *holding coal lands, purchasing, mining, or vending coal*, our railroad will be a *carrying road only*, and it will occupy the *best*, and indeed, the *only remaining outlet* northward through the entire length of the coal field, and with distance in its favor, and with grades nearly one half less than those railroads that now cross the valley at right angles, it will open to the owners of coal lands, the northern market, embracing the whole of the interior of the State of New York, from Albany to the Lakes.

When the cities of Albany and Oswego are connected, by the construction of the Lackawanna and

Lanesboro railroad, with the North Carbondale coal basin, how greatly will those lands in that basin be enhanced in value! A market will then be opened for the coal they contain, in which there can be no competitor from any other part of the Anthracite coal fields of the State—a market constantly increasing, and which will take all the coal that can be mined in that basin, until it is exhausted, which it will not be, for very many years to come.

Five and six hundred dollars per acre, have been paid for coal lands in the valley of the Lackawanna, and one thousand dollars per acre for land near Pittston. This sum, although great as it may appear to be to those, who have not a knowledge of the capacity of yield and profit of our Pennsylvania Anthracite land, is small in comparison to the value set upon coal lands in Europe. There their intrinsic value is not near as great as that of ours. There the veins are much smaller, and they lie at far greater depths below the surface, and consequently much more expensive to open and work them, than those of our Anthracite regions, and yet they sell for ten times as much as the highest price asked for coal lands, in the Lackawanna region. Coal lands in this region must certainly advance in price—they will never sell at lower rates than they can be purchased for at the present time.

In consideration of the superior advantages the lands I have been speaking of possess, the coal lying above

water-level, all of which can be mined very cheap, and its location being nearer to the markets of Western New York and the Lakes than the mines further down the valley, and covered with timber of large growth, I can see no reason why it will not be worth twice as much per acre when the railroad is made to Lanesboro, as lands further down the valley, which now sell for four and five hundred dollars. The time is not far in the distance, I am sure, when these lands will sell for double these sums and more.

The Delaware and Hudson Canal Company are about to pursue a different policy to that which they have hitherto had in excluding all others from their road. They talk now of becoming coal carriers and coal purchasers. In the event of their carrying out this plan, the land I have reported upon will be brought into operation by opening the mines, and transporting the coal over the Company's road and canal, to New York and the east. Not more than two miles of a branch road will be required to connect the land referred to with the Delaware and Hudson Company's gravity railroad, leading from Carbondale to Honesdale, their shipping place.

The Pennsylvania Coal Company, who now ship their coal by the Delaware and Hudson Canal, contemplate making a connection with the Erie Railroad. This will dispense with their using the canal, and make room for more than half-a-million of tons of coal annu-

ally, which will be supplied from other sources, and none presents so favorable a location for furnishing it as the land on which I have been reporting.

WILLIAM F. ROBERTS,

*Geologist.*

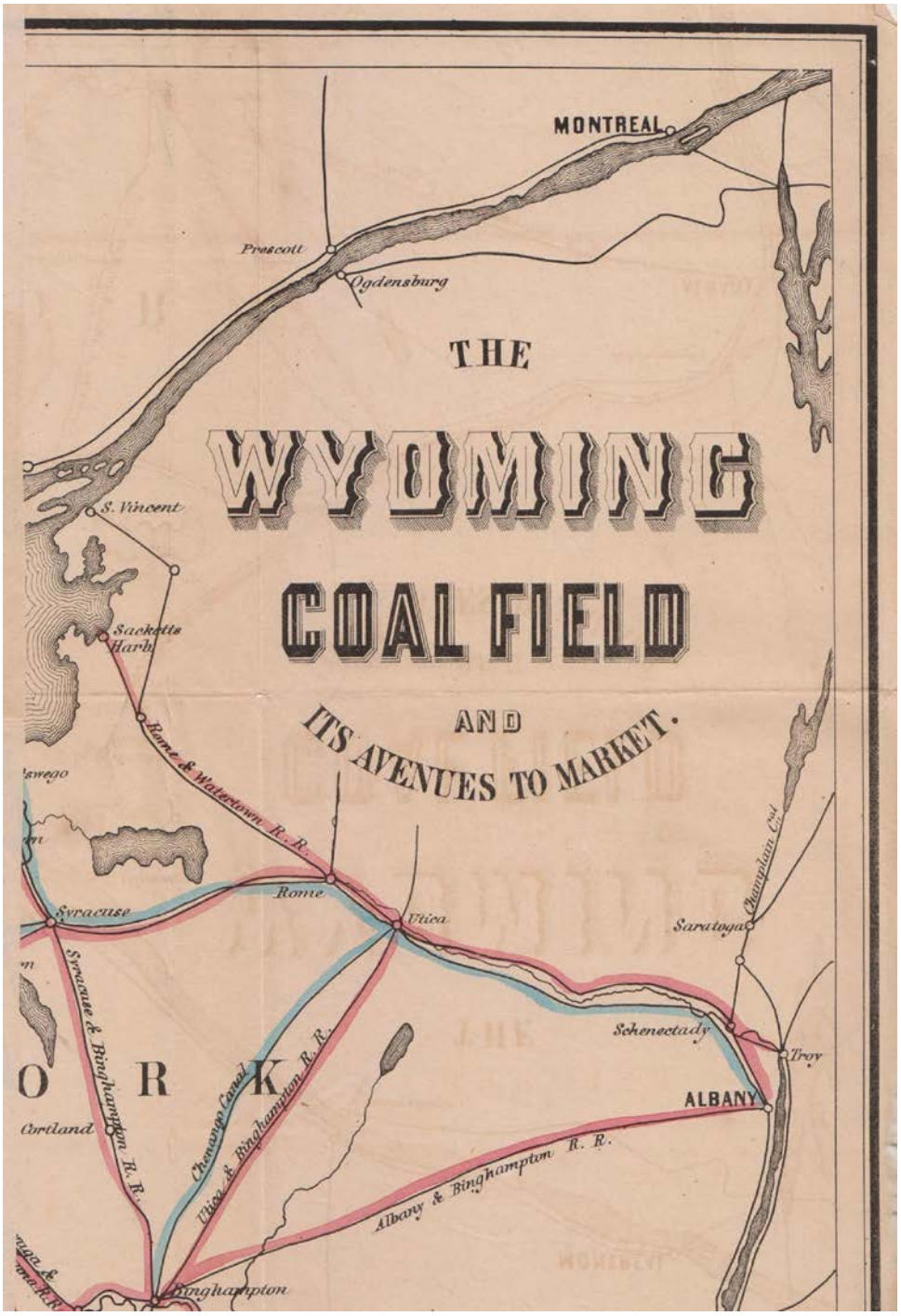
*November* 3d, 1857.

On August 18, 2022, David Maxey also donated two very rare maps of the anthracite coal fields of Northeastern Pennsyvania to the Carbondale Historical Society. Deteails from both of those maps are presented below.

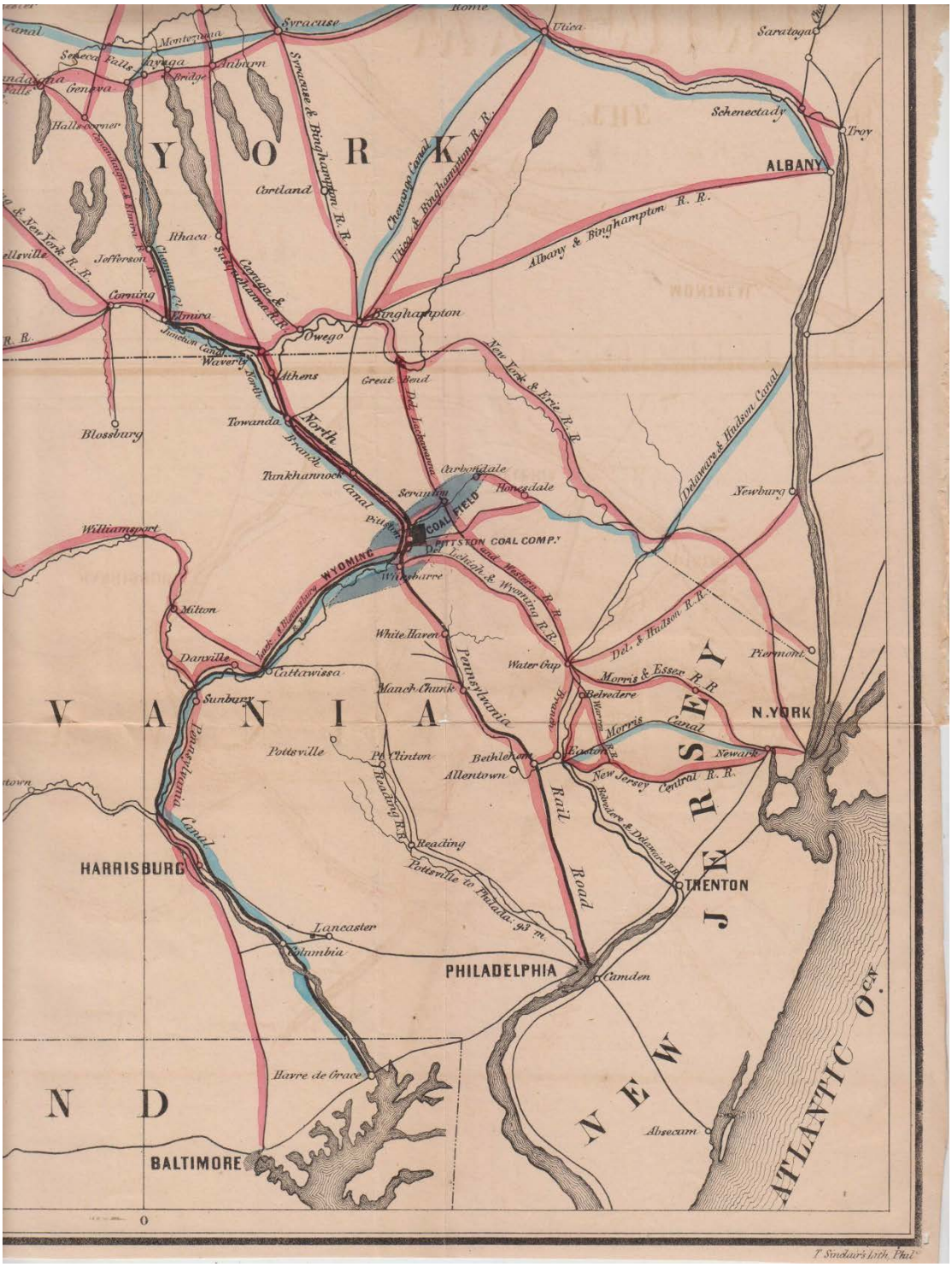
1. *The Wyoming Coal Field and Its Avenues to Market.* (T. Sinclair's Lith, Phil)

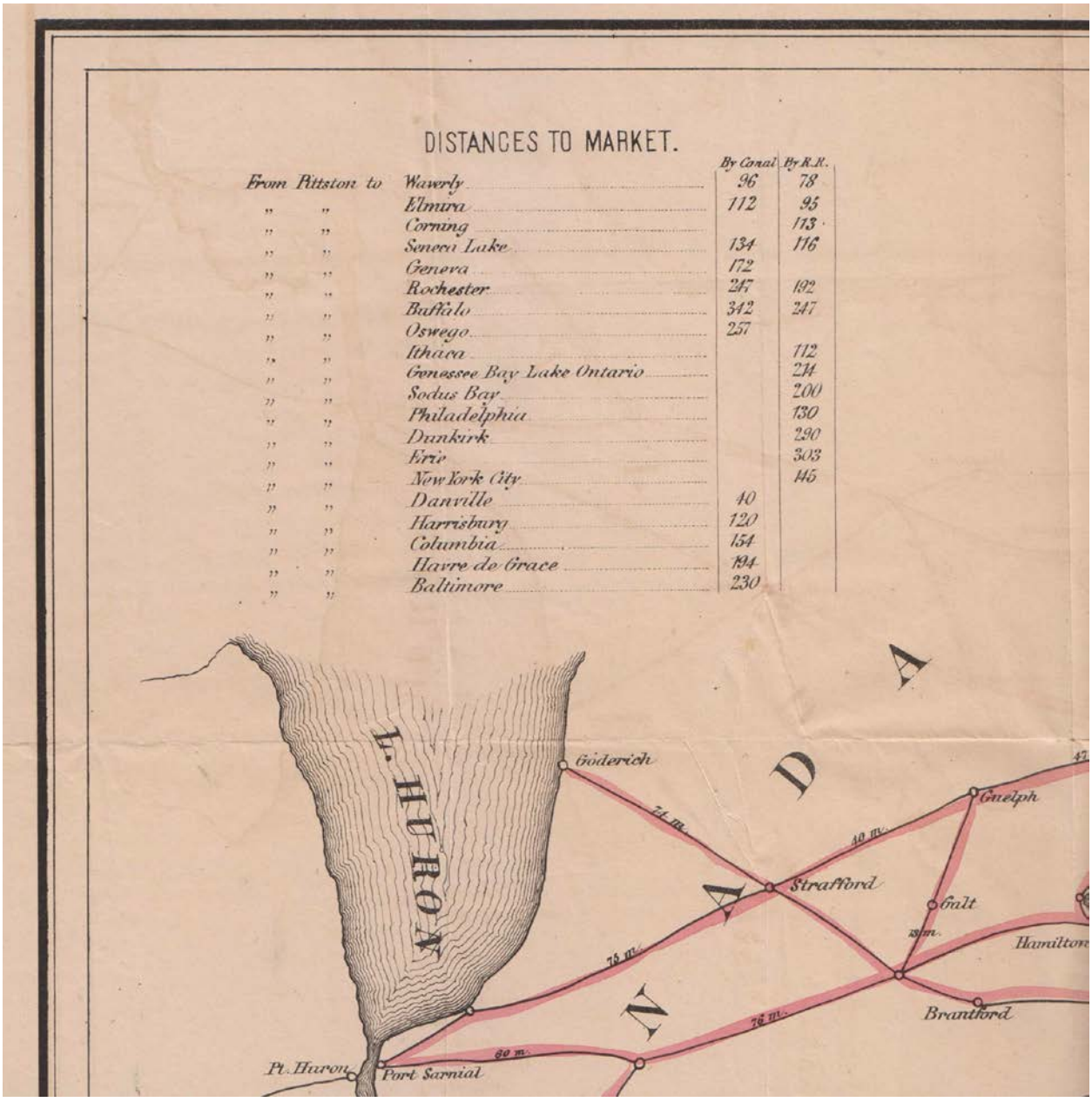
2. *Map Showing the Position and Connection by Rail Road of Scranton with New York City and Interior The Canadas, Eastern States, and the South* (T. Sinclair's Lith. Phila.)

*The Wyoming Coal Field and Its Avenues to Market.* (T. Sinclair's Lith, Phil)

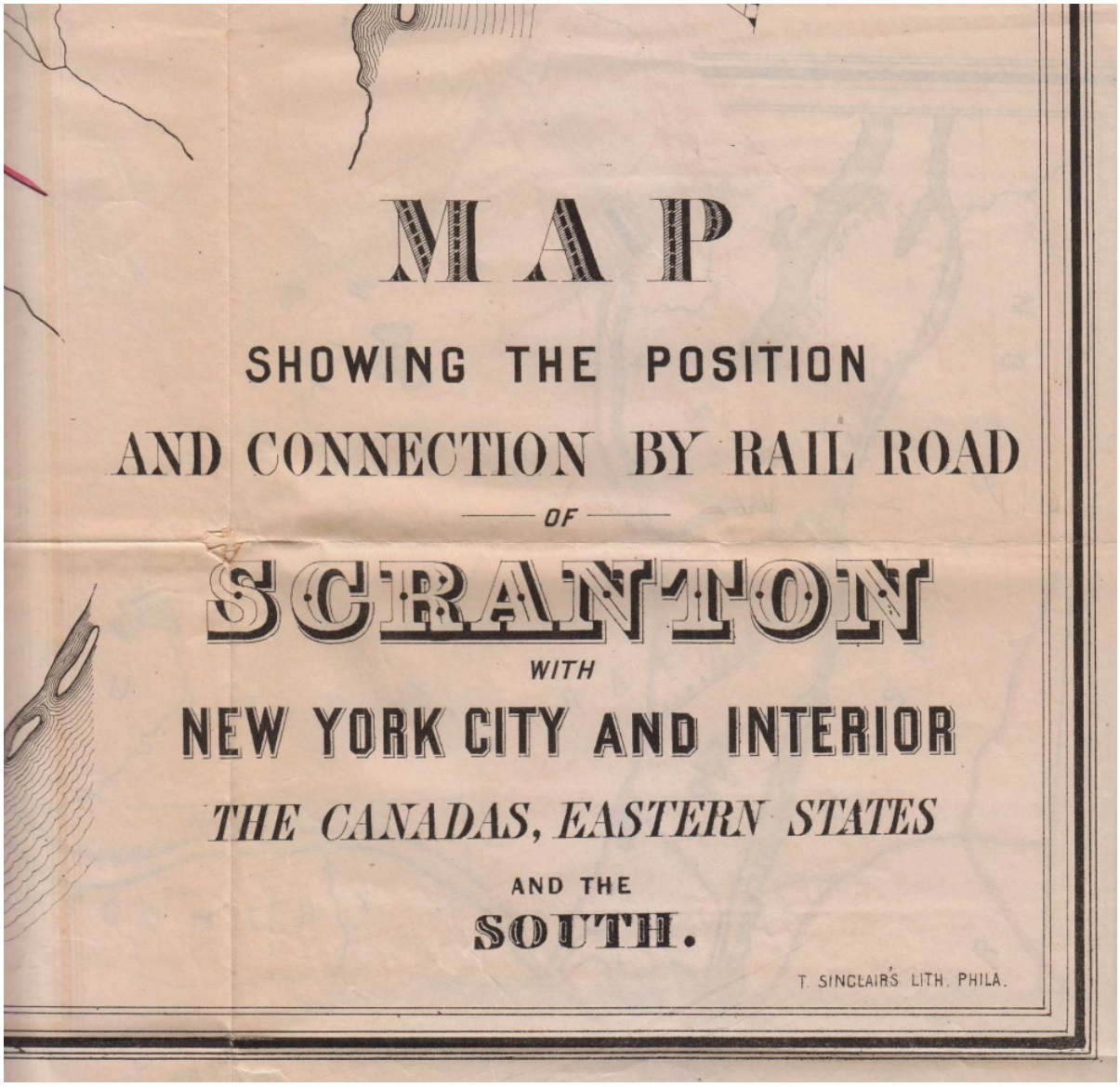


Detail showing the northern coal field given below:




DISTANCES TO MARKET.
From Pittston to
Waverly 96 78
Elmira 112 95
Corning 113
Seneca Lake 134 116
Geneva 172
Rochester 247 192
Buffalo 342 247
Oswego 257
Ithaca 112
Genessee Bay Lake Ontario 214
Sodus Bay 200
Philadelphia 130
Dunkirk 290
Erie 303
New York City 145
Danville 40
Harrisbury 120
Columbia 154
Havre de Grace 194
Baltimore 230
By Canal
By R.R.
L. HURON
Goderich
74 m.
Strafford
40 m.
Guelph
Galt
18 m.
Hamilton
75 m.
78 m.
Brantford
80 m.
Pt. Huron
Port Sarnia

2. “Map Showing the Position and Connection by Rail Road of Scranton with New York City and Interior The Canadas, Eastern States, and the South” (T. Sinclair’s Lith. Phila.)



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